Vol 3 Issue 11 May 2014 ISSN No :2231-5063

International Multidisciplinary Research Journal

Golden Research Thoughts

Welcome to GRT

RNI MAHMUL/2011/38595 **ISSN No.2231-5063**

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.net

Golden Research Thoughts
ISSN 2231-5063
Impact Factor : 2.2052(UIF)
Volume-3 | Issue-11 | May-2014
Available online at www.aygrt.isrj.net

EFFECT OF RESISTANCE TRAINING ON SELECTED PHYSICAL VARIABLES AMONG FEMALE HOCKEY PLAYERS

G. Vasanthi and P. Y. Sivachandran

Assoicate Professor, Dept. of Physical Education, Pondicherry University, Pondicherry, India.
Ph.D Research Scholar, Dept. of Physical Education, Pondicherry University, Pondicherry, India.

Abstract:-The purpose of the study was to find out the effect of resistance training on selected physical variables among female hockey players. To achieve the purpose of the present study, thirty female hockey players from PKR College of Arts and Science for women and Gobi Arts and Science College, Erode, Tamilnadu, were selected as subjects at random and their age ranged from 18 to 21 years. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=30) were randomly assigned to two equal groups as resistance training group (RTG) and control group (CG). The resistance training group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups analysis of covariance (ANCOVA) was used. The findings of the study has indicated that eight weeks of resistance training have significant effect on selected physical variables i.e., speed and agility of female hockey players. Hence the study reveals that resistance training has an important role for the development of speed and agility on hockey players.

Keywords: Resistance, Physical Variables, Female Hockey Players.

INTRODUCTION :-

Resistance training is a vital component of all fitness programme for individuals who exercise for the health benefits. Athletes in sports requiring strength and power, such as weight lifting; bodybuilding and sprinting must emphasize resistance training. However many other athletes also benefit from strength training. Resistance training is an accepted training method for athletes in a variety of sports. With the proper exercise prescription, training goals such as increased muscle strength, muscle hypertrophy, improved body composition and improved sports performance may be achieved. Strength Training is a method of improving muscular strength by gradually increasing the ability to resist force through the use of free weights, machines, or by using the person's own body weight. Strength training sessions are designed to impose increasingly greater resistance, which in turn stimulates development of muscle strength to meet the added demand.

METHODOLOGY

To achieve the purpose of the present study, thirty female hockey players from PKR College of Arts and Science for women and Gobi Arts and Science College, Erode, Tamilnadu, were selected as subjects at random and their aged ranged from 18 to 21 years. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=30) were randomly assigned to two equal groups as resistance training group (RTG) and control group (CG). The resistance training group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups analysis of covariance (ANCOVA) was used.

RESULTS AND DISCUSSION

The detailed procedure of analysis of data and interpretation were given below,

Table-I
Summary of Mean for the Pre and Post Tests on Selected Physical variables among Female Hockey Players

SNo	Variables	Training Group				Control Group			
		Pre	SD (±)	Post	SD (±)	Pre	SD (±)	Post	SD (±)
1	Speed	9.05	0.29	8.58	0.16	9.17	0.35	9.27	0.34
2	Agility	11.53	0.26	10.61	0.16	11.38	0.28	11.36	0.28

The table I shows that the pre and post test means on selected physical variables among female hockey players.

Table-II
Analysis of Variance of Pre Test Scores on Selected Physical Variables among Female Hockey Players

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Squares	F-Value
1	Speed	BG	0.12	1	0.12	1.14
		WG	2.97	28	0.10	
2	Agility	BG	0.16	1	0.16	2.16
		WG	2.10	28	0.07	
		WG	135.33	28	4.83	

* P < 0.05 Table F, df (1,28) (0.05) = 4.19

In table II, the results of analysis of variance of pre test scores on speed (1.14) and agility (2.16) were lesser than the table value of 4.19 indicating that it was not significant for the degrees of freedom (1,28) at 0.05 level of confidence indicating that the random sampling was successful.

Table-III
Analysis of Variance of Post Test Scores on Selected Physical Variables among Female Hockey Players

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Squares	F-Value
1	Speed	BG	3.51	1	3.51	48.34*
		WG	2.03	28	0.07	
2	Agility	BG	4.16	1	4.16	78.15*
		WG	1.49	28	0.05	
		WG	386.26	28	13.79	

* P < 0.05 Table F, df (1,28) (0.05) = 4.19

In table III, the results of analysis of variance of post test scores on speed (48.34) and agility (78.15) were greater than the table value of 4.19 indicating that it was significant for the degrees of freedom (1,28) at 0.05 level of confidence.

Table-IV
Analysis of Covariance of Selected Physical Variables among Female hockey Players

Sl. No	Variables	Adjusted Mean		Source of Variance	Sum of Squares	df	Mean Squares	F-Value
		RTG	CG					
1	Speed	8.58	9.27	BG	3.44	1	3.44	45.93*
				WG	2.02	27	0.07	
2	Agility	10.62	11.35	BG	3.68	1	3.68	68.04*
				WG	1.46	27	0.05	
				WG	378.82	27	14.03	

* P < 0.05 Table F, df (1,27) (0.05) = 4.21

In table IV, the results of analysis of covariance on speed (45.93) and agility (68.04) were greater than the table value of 4.21 indicating that it was significant for the degrees of freedom (1,27) at 0.05 level of confidence.

Figure-I Shows the Mean Values of Resistance Training Group and Control Group on Speed among Female Hockey Players

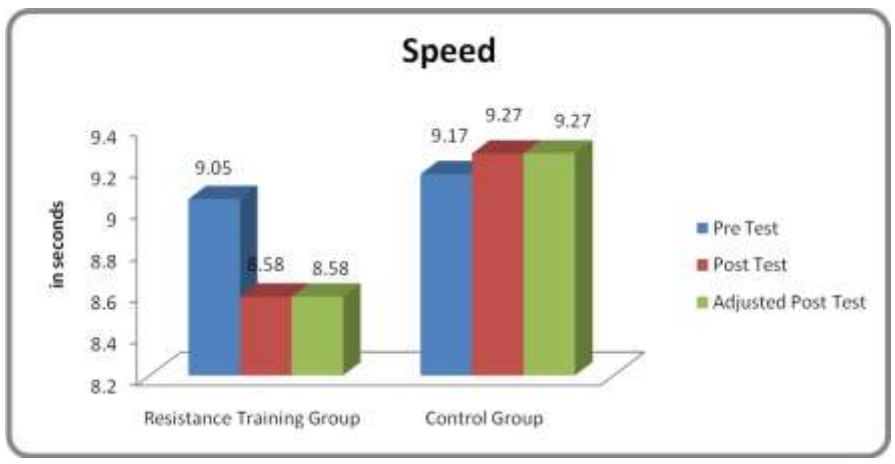

Figure-II Shows the Mean Values of Resistance Training Group and Control Group on Agility among Female Hockey Players

DISCUSSIONS AND CONCLUSIONS

For the selected variables speed and agility the results between pre and post (8 weeks) test has been found significantly higher in experimental group in comparison to control group. The findings of the present study has strongly indicated that eight weeks of resistance training have significant effect on selected physical variables i.e., speed and agility of female hockey players. The result reveals that the resistance training group showed better performance on speed and agility than the control group owing to the effects of resistance training.

REFERENCES

1.Alcaraz, P.E., Perez, G. J., Chavarrias, M. & Blazevich, A.J. (2011). Similarity in adaptations to high-resistance circuit vs. traditional strength training in resistance-trained men. J Strength Cond Res. 25(9):2519-27.
2.Balamurugan (2006). Comparison of motor ability of cricket and hockey players. Unpublished Master's Thesis. Bharathiar University.
3.Dick, F. W. (1980). Sports Training Principles. Great Britain: University Press Cambridge.
4.Dorthy, Y. & Landie, S. (1992). Field Hockey-Fundamental and Techniques. London: Faber and Faber limited.
5.Dureha, K.D. & Akhil, M (2003). Teaching & Coaching Hockey. New Delhi: Paperbacks.
6.Thomas, R.B. (1994). Essential of Straining Training and Conditioning. Champaign Illinois: Human Kinetics Publishers.

G. Vasanthi
Assoicate Professor, Dept. of Physical Education, Pondicherry University, Pondicherry, India.

P. Y. Sivachandran
Ph.D Research Scholar, Dept. of Physical Education, Pondicherry University, Pondicherry, India.